

ON

METRIA:

AND ON THE

DUAL CLINICAL CHARACTERISTICS OF METRIAL BLOOD-POISONING.

BY

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VICE-PRESIDENT OF THE OBSTETRICAL SOCIETY OF LONDON.

MANCHESTER: A. IRELAND & CO.
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PRICE ONE SHILLING.

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The following is the substance of two papers on "Metria" and Metrial blood-poisoning, read—the one to the Owens College Medical Students' Debating Society, on February 28th—the other to the Manchester Medical Society, on March 2nd, 1881.

Having been asked to publish one of these, I found that I should hardly be doing justice to my subject or myself unless I published both. As this, however, would have involved much repetition, and as there were matters in the former of interest only to the students and myself, I have endeavoured to omit any repetitious or irrelevant matter, and to amalgamate the two papers. This causes, I fear, some want of literary continuity which, however, I hope will not interfere with the object I had in view, viz., to give to the students a condensed view of a very difficult subject, and to present to my fellow-practitioners a clinical point of great practical importance.

MR. PRESIDENT AND GENTLEMEN OF THE
OWENS COLLEGE MEDICAL STUDENTS'
DEBATING SOCIETY,

HE would be a bold man who would assert that the long and weary discussions as to the nature of puerperal fever have been closed, and that anything like perfect unanimity has been arrived at. Yet there are signs of an approach to this. Step by step certain factors in its production have been worked out. Starting with the purely inflammatory theories of last century, so ably and fervently maintained in this, by Dr. Robert Lee, a great step was made when the similarity which exists between puerperal and surgical febrile affections was enforced with equal energy by Sir James Simpson. The close alliance of the disease with erysipelas, scarlatina, and other infectious diseases, though often casually observed, was worked out here by Tyler Smith, Braxton Hicks, and Robert Barnes; and Martin of Berlin pointed out the same connection with diphtheria, although he exaggerated its frequency. A variety of causation was thus established. Hervieux and others drew attention to the condition of the blood in the puerperal woman which predisposes to the influence of external causes of infection, and which modifies and assimilates the symptoms, whence-soever derived, so as to have given rise to the idea of a uniform and specific fever; and Dr. Fordyce Barker has, by his learned and eloquent pleading, done as much as may be done to retain the belief in the existence of such a specific fever, essential in itself as much as scarlatina or typhus.* But facts have been too strong even for him, and

* "The Puerperal Diseases, by Fordyce Barker, M.D." Churchill, 1874. The best historical sketch of the subject available to the English student.

I think I am fairly justified in saying that it is now the almost universal belief of the highest authorities that there is no such disease as puerperal fever in this sense of the term—that it does not, like small-pox, or scarlatina, or other specific fevers, have its own well-defined symptoms and signs, which vary within the narrowest of limits, communicating itself, and itself alone, to other patients, and communicated only by cases of a strictly similar disease, or by a single proper contagium. No one has been insane enough to propose that this supposed specific fever which is innocuous to the male half of the human race should be sent to our fever hospitals. I have had not a little experience, in consultation, of the cases of so-called puerperal fever occurring in this district, and I have long arrived at the conclusion that it does not exist except as a modification, due to the puerperal state, of many other affections, mostly, though not wholly, of a septic or zymotic character.

Time will not allow me to adduce such evidence as I possess, and as many of you may unfortunately accumulate for yourselves by-and-by, that a lying-in woman poisoned by misadventure with the contagium of erysipelas or scarlatina, or inoculated from without with the sepsis from a surgical wound (*heterogenesis*), or poisoned from within by decomposing placenta, membranes, or clots (*autogenesis*), or exposed to the depressing influence of cold or traumatic injury, may, in each case, exhibit every symptom which has been considered as characteristic of puerperal fever. You cannot produce sporadic cases of the other essential fevers in the same multifarious way, I might almost say, at will.

In one sense only could I explain or admit the similarity of puerperal fever to the other specific fevers, and it would involve theories which are not yet generally accepted. When the early history of the zymotic diseases has been re-investigated, and when the facts educed shall have been placed alongside of those which Pasteur and his followers are rapidly accumulating as to the potential variations of zymotic germs, and interpreted in the light of modern evolution, it may turn out, I think it certainly will, that alliances exist between

many or all of our so-called specific diseases which are hardly credible at present. Our grandfathers who could see no distinction between scarlatina and measles were not more stupid than ourselves, and they were quite as great adepts at hair-splitting subdivisions. One may safely predict that Rötheln may not be the only "missing link" which will establish for itself in the future a distinguishing name and an independent existence. From this point of view puerperal fever may occasionally acquire the right to be considered as much or as little an essential fever as the rest. Let us hope that sanitary precautions may continue to defeat such ambitious attempts.

Should the name puerperal fever be continued when we have abandoned the specific entity which it represents? I fear that most of us have resigned ourselves to this, and that we continue to use the term to include several different affections which are met with in the puerperal state, and which in many ways bear a family likeness though differing in gravity. I cannot agree to the wisdom of this course, and I think that those who do so lay themselves fairly open to the criticism of Dr. Fordyce Barker. He says: "But in writers belonging to this school you will frequently meet with an expression of regret that the term puerperal fever has been adopted in medical nomenclature, the reason assigned being that it is an unfortunate one in that it is used loosely to include entirely distinct groups of disease. But those who make this complaint are the greatest sinners in this way, and confession with them is not accompanied by repentance or reform." Those who object to the name on the ground of its unscientific character and delusive meaning should, to be consistent, abandon it. But I object to it on other than mere scientific grounds. Far from being a purist in such matters, I recognise the necessity in a fluctuating and progressive science such as medicine of frequently adopting comprehensive terms until time enables us to subdivide or rearrange with some approach to scientific accuracy. What else are we doing when we speak of Bright's disease or phthisis, or of a large percentage of diseases as known to us? Our brand-

new Greek names of precision, of which every medical journal contains a score or two of fresh ones, are as yet unintelligible to the great body of the profession, and long before they are so diffused the vast majority of them will be obsolete. If, then, it be true that puerperal fever is scientifically a misnomer, seeing that it is not a fever in the usual sense of the term, but a mere generic title for several febrile or inflammatory conditions, I object *a fortiori* to its further use, as a term which is fraught with evil memories, which is redolent of foolish and obsolete controversies, and which is destructive of hopeful prognosis. If we must include under one title affections varying much in gravity, why stamp the whole of them with a trade mark (I speak to a Manchester audience) which is only too well known to our patients—with a name to which they will never attach the wide scope, the meaningless meaning, which we intend to do? If puerperal fever be dead, let us bury it decently out of sight. R. I. P.

If we do this, two other courses are open to us, the one to endeavour, in spite of the acknowledged difficulty of the task, to separate the various forms of disease included—to assign to each its proper nomenclature, and study, and treatment, and to abandon any single comprehensive term; the other to adopt some less objectionable inclusive term—one less closely associated with the false theories and fearful memories of the past—to recognise its provisional character, while endeavouring more clearly to work out the included factors, and utilising for practical purposes every particle of differential knowledge which seems to be placed on a firm basis. I prefer the latter course, for how seldom can we define to which pathological section the individual case should belong—how often are two or more forms intermingled—and how frequently do we find that the acute peritonitis or metritis of to-day is the general septicæmia or the scarlatina of to-morrow.

It is for these reasons that I venture to plead for the adoption of the term “metria.” It was strongly recommended by the late Registrar-General and Dr. Farr; it conveys to

the statistician all the information he at present desires or can obtain, and is already used to a considerable extent in our national vital statistics ; it affords to the public just as much hope or despair as your interpretation of individual cases warrants you in suggesting ; and it conveys to the profession the requisite idea of community of symptoms and divergency of cause, treatment, and prognosis divorced from the errors which cling to its predecessor, use it as you will.

Insisting, then, on the common term "metria," it remains to be seen what is included in it, and what separate conditions you will have to bear in mind for practical purposes ; for though you may rightly diagnose a case of Bright's disease, you cannot successfully treat it unless you trace back the vascular tension, or the alcoholic tissue-changes, or the zymotic blood-poisons which have preceded, or look forwards to the pericarditis, or general dropsy, or brain derangements which may accompany or follow it.

I was privileged to hear a communication on the treatment of puerperal fever, at Birmingham, by Dr. Matthews Duncan, which is since published in the *Lancet* of October 3rd and November 6th, 1880. Though differing from him on one or two points, I beg to acknowledge my great indebtedness to this communication, and especially have I adopted his classification with one single difference. He divides what he still condescends to term puerperal fever into four groups, taking, more or less, the causation of the disease as his basis of classification. He speaks of (1) the inflammatory, (2) the pyæmic, (3) the septicæmic, and (4) the sapræmic forms or types. I will take the liberty of adding (5) the zymotic. Other modes of classification less simple and based more upon symptomatology might be devised, and if you will look into almost any text-book of midwifery you will see what a glorious field for ingenuity exists and has been well worked in the past. On the whole, the division just given most commends itself to me. How this is to be used so as to be a help rather than a hindrance—a practical guide to treatment and prognosis, rather than a series of scientific

conundrums,* I will attempt to indicate, and will try to point out the line of thought which, under its influence, should dominate our practice.

Setting aside, then, those slight or short febrile attacks which often accompany the first flow of milk, a woman attacked by metria will have one or more, generally several, of the following symptoms:—Rigor, quick pulse, marked rise in temperature, abdominal pain, tympanitis, lochial or milk suppression, diarrhœa, coliquative sweating, or occasionally sthenic fever. Noting carefully the presence or absence of these or any additional symptoms, our prognosis and treatment will be successful to a great degree in proportion as we bear in mind the above-named five conditions and search for their presence or evident predominance.

First: We may have the inflammatory element, and a certain amount of it is seldom absent—peritonitic, metritic, or pelvic inflammation of traumatic character, or secondary to one of the following blood-poisonings. The acuteness of local pain is our chief indication in the way of diagnosis, and the sthenicity of the symptoms is our chief indication for antiphlogistic treatment. When the inflammatory element is predominant and acute, it is not likely to be overlooked; but no matter how strictly inflammatory the symptoms may appear to be, you must not lose sight of their possible accompaniment by or dependence on some form of blood-poisoning; and, on the other hand, the absence or slightheadness of local inflammatory symptoms should not delude you into neglecting a careful examination of the pelvic viscera during the attack or after its subsidence. Many a case have I seen where two or three days of constitutional disturbance, with scarcely any local manifestations, has been found, weeks afterwards, to have filled the brim of the

* I am surely justified in applying the term scientific conundrum to such a classification as the following. Dr. Blundell describes one among many other forms of puerperal fever under the title hydrosis, on account of its tendency to excessive sweating. And of hydrosis he tells us there are seven distinct varieties—(1) the ultra-malignant, (2) the malignant, (3) the acute, (4) the lingering, (5) the mutable, (6) the fugacious, and (7) the remittent. Fancy a complete classification done in this style and translated into modern Greco-Medicalese.

pelvis with solid lymph, and to have fixed the uterus and surrounding parts in positions that would give rise to years of future misery.

Second: We may have the same pyæmic infection that occurs in surgical practice, and, considering the enormous opportunities afforded by the uterus for phlebitis and venous absorption, the wonder is that pyæmia is so rare. I use the word in the old-fashioned sense indicated long ago by Sedillot, who distinctly separated the action of pure pus from that of the putrid forms which we now all recognise as septic. The infrequency of true pyæmia should not blind us to the fact that it may be a sequel of metria or even its essential feature, and this knowledge suggests the necessity for prolonged watching of the temperature and for a careful investigation of the evidences of secondary abscess in the pelvis or elsewhere. Especially should one view with the utmost suspicion any symptoms which might be carelessly put down as rheumatism of the joints, or any signs of secondary inflammation about the non-pelvic viscera.

Third: We may have the presence of septicæmia with all its baneful effects, and modern investigation tends more and more to the belief that this is too frequently the main factor. True it is that we have little control over the disease when it is presumed to depend on bacterial poisoning. But how earnestly does this plead with us to use the preventive means which lie within our reach. We cannot indeed, in ordinary practice, carry about our steam kettles; nor can we apply our antiseptic gauzes and other dressings to the utero-placental raw surface; but we can cease to lock the stable door when the horse is stolen by applying antiseptic glycerine from the first to torn external parts, and by washing the vagina and possibly torn cervix uteri with antiseptic lotions before instead of after the signs of danger have arisen, and we can redouble our care in removing all dangerous scraps of placenta or membranes. When I think of the frequency with which I have seen busy practitioners proceed to the treatment of a case of labour, without even the simple antiseptic precaution of a little soap and water to the hands,

and even introducing unclean instruments into the vagina or uterus, I cannot hold us as a body entirely guiltless of a certain amount of metrial mortality.*

Fourth: We may have a condition of blood-poisoning described by Dr. Duncan as *sapræmia*. I was, until hearing his paper, unfamiliar with the term, though I believe it has been used by others, but the ideas expressed by it and the practice dependent on it have long been amongst my most treasured clinical experiences. The word "*sapros*" means stinkingly putrid, and *sapræmia* means therefore the contamination of the blood by such a medium. "Well," some of you may say, "this is only another new-fangled name for *septicæmia*." But septic or germ bearing fluids do not necessarily stink, and some stinking fluids would appear to be hardly septic in action, so the terms are not quite synonymous. However that may be, we have two forms of wound poisoning in metria which are clinically distinct. In the one, often—most often—arising from a slight perineal tear, just as it may do from a leech bite or a vaccine scratch, you have a something introduced into the system which rapidly increases in activity, which seems to feed upon the soil it finds, and to multiply in intensity until the patient succumbs or until it comes, like other ferments, to a natural term; this is *septicæmia*, an evident *contagium vivum*. On the other hand, the patient is attacked as by a virulent poison, and if nothing be done the end is usually not far off. But if the uterus or vagina be thoroughly washed, not necessarily with an antiseptic fluid, or if a portion of clot or secundines be removed from either, a few hours suffice to see an end of the most threatening symptoms. Nature speedily eliminates the poison, leaving nothing that resembles in its working a living ferment. This is the so-called *sapræmia*. I adopt the term provisionally and in deference to others, but I am sure that we are right in insisting on a distinguishing term of some kind for clinical purposes,

* See a very suggestive paper read to the Edinburgh Obstetric Society on November 24th, 1880, by Dr. J. Halliday Croom, and which I have just received in pamphlet form.

even if it does ultimately turn out that both poisons are at some stage the product of living germs. The practical bearing of it all is this, whenever you have metria it may depend on sapræmia, or a poison which is not living, after its absorption at any rate, and which will speedily be eliminated if you see that no more is introduced. Powerful vaginal injections, antiseptic of course, for you do not know certainly what you have to deal with, should therefore constitute one of your first steps in treatment. Injection of the uterus by double cannula should be the next, if improvement do not follow the first, and it may even be necessary to dilate and explore the uterus for portions of the embryo. I hope, on Wednesday evening, to treat this part of the subject a little more fully at the Medical Society.

Fifth: We may have present the special contagium of one of the zymotic diseases or essential fevers, especially, in this country, erysipelas or scarlatina. Of course, this might be summarily dismissed from our catalogue with the remark, "if the patient has got one of these it is not metria." But practical experience teaches the unwisdom of this argument. You may have all the symptoms of metria, the local abdominal ones predominating, and not till the patient is moribund have a particle of evidence that scarlatina is present; nay, I have seen too many cases where the patient has died of typical "puerperal fever," and yet where a consideration of the surroundings afterwards—of the probability of scarlatinal infection—and of the immediate outbreak of scarlatina in the family could leave no rational doubt as to the nature of the disease. I remember seeing a moribund case in a remote village where the practitioner could not account for the fever, although the patient's mother was lying dead in the house from erysipelas! Keep this zymotic element then in view as one which may be very real. It will add at least to your care in isolating your patient from the first. It is no more unscientific than the other forms or factors we have named, and if, when it is fairly pronounced, you must alter your nomenclature, it is no more than you may probably do in other cases when they terminate in pelvic

abscess, phlegmasia dolens, cystitis, embolic pneumonia, aphasia, or any of the other accidents which ensue.

Let me try to summarise this summary of the forms, separate or intermingled, of metria.

First: Carefully look for the signs of local inflammation, and do not forget to search for its products when the acute attack is past.

Second: Remember that secondary pyæmic abscess may follow in the wake of apparently mild cases.

Third: Give to septicæmia the most prominent place in your thoughts, and let the fear of it influence your daily practice.

Fourth: Remember that the most apparently hopeless cases may often be saved by the washing away or removal of further sapræmic sources of infection; and

Fifth: Never forget that latent scarlatina or other infectious diseases (probably all of them) may perfectly imitate the other forms of metria from the beginning to the conclusion of the case, and thus become distinctly one of them.

MR. PRESIDENT AND GENTLEMEN OF THE
MANCHESTER MEDICAL SOCIETY,

LAST Monday I read a paper to the Medical Students' Society, wherein I endeavoured to point out the value of the term metria as a successor to that of puerperal fever, as now generally understood. I pointed out the forms of disease which are thus included in one comprehensive term.

* * * * *

It is with regard to two of these that I wish to say a few words to-night—the septicæmic and the so-called sapræmic forms. I wish to ascertain whether in your experience, which in the aggregate must be very great, these two terms do not indicate a very real difference between two

forms of blood-poisoning—a difference as great practically as theoretically—a difference which, though recent physiological experiments are perhaps tending to explain it, has long had a clinical and practical recognition in the department of obstetrics.

By the term *sapros*, as I understand it, is meant a poison which, when absorbed into the economy, acts precisely as if it were free from any living element, in contradistinction to one (*sepsis*) which is as frequently met with in obstetrics, and which shows such a tenacity of life, and such a power of reproduction in the human system, that the least drop of it is ineradicable and generally fatal.* Let me first mention two or three cases, briefly but sufficiently reported, which will illustrate the two forms of blood-poisoning.

Case I. : Mrs. D—— was confined naturally, though after a somewhat severe labour, of a living child—her first. There was slight tearing of the perineum, everything else was normal for the first two days. On the evening of the third she had a severe rigor, followed by some abdominal tenderness and tympanitis. Pulse, 130 ; temperature, 104. Slight diarrhoea and vomiting. She was treated by opiates, moderate stimulation, warm poultices, and antiseptic vaginal injections. Next morning she was a little better, but she grew worse towards evening, when I first saw her. The tympanitis continued, but there was little or no abdominal pain. Lochial discharge almost suppressed, not foetid. Pulse, 140; temperature, 103·5; expression hypocratic; mental faculties clear. Ordered quinine and opium—the uterus to be washed out with double cannula. No improvement followed. For two more days the pulse and temperature oscillated within narrow limits, and without apparent periodicity. On the morning of the seventh day after delivery she died rather suddenly. This is too common and too typical a case of metrial septicæmia to require additional details.

Case II. occurred to me in 1866. I give it, although from

* I use the term *sepsis* in its commonly received acceptation, conveying the idea of present vitality.

memory only, because it has influenced all my future practice. A hospital midwife asked me to see a home-patient whom she had delivered six days previously, and who had been seized with symptoms very similar to those just mentioned the day before I saw her. She had grown very rapidly worse, and I found the woman almost pulseless, livid in complexion, enormously tympanitic, hiccapping, and barely conscious. The fœces were passing involuntarily, and there was a little fœtid lochial discharge. I was assured that the secundines had come away perfect and entire. The symptoms were precisely similar to what I have seen in scarlatinal or erysipelatous metria. I believed the woman to be *in articulo mortis*. I left the room as speedily as possible, told the midwife to give a vaginal injection of warm water, and gave an order for a little brandy and beef tea. I never went back again, having at the time a considerable amount of midwifery on hand. A week afterwards I met the midwife, who gave me the following account. "The warm water injection seemed to rally her at once and make her more comfortable, but we could not get the brandy or beef tea till next day, so I gave her some gruel and repeated the warm injection three or four times. Nothing solid came away, but by the evening of next day she was quite well. She is now sitting up and as well as any other patient for the time." That was the whole case, not a very scientifically treated one, I admit, but certainly a very successful one. I have never seen a more complete resurrection from metrial sapræmia.*

Case III.: Mrs. G——, residing in Cheshire, had not menstruated for about eighteen weeks. Though a multipara she considered herself not to be pregnant, and consulted a physician of great obstetric repute. He also believed her to be not pregnant, passed an uterine sound, and ordered aloes and ergot. After several days she returned home. The day after this she was confined of a still-born fœtus with its secundines; the latter were not shown to her regular family

* The midwife very improperly continued her practice, but without any untoward result.

adviser. On the fifth day after this I saw her with him. She had then a pulse of 120; temperature, 103. The os uteri was closed against the finger, and a bimanual examination did not show the uterus to be larger than might be expected. The lochial discharge was scanty, but not perceptibly fœtid. We gave full doses of ergot, and I sent out by train a double cannula to wash out the uterus. An hour after the injection the temperature fell rather below the normal, and by evening all danger seemed to have passed. Forty-eight hours afterwards she had a severe rigor, the pulse became very rapid, the temperature rose to 105, the abdomen became turgid, there was slight delirium and copious sweating. The intra-uterine injection (antiseptic) was again used, and by morning all serious symptoms had again passed away. I saw her at noon, and, making a vaginal examination, found a small portion of membrane projecting through the cervix. This I carefully removed with forceps, and we gave another injection. She never had another bad symptom. But for the removal of the membrane we might have had other attacks of sapræmia, and perhaps ultimately septicæmia.

Now, gentlemen, with these three cases before us, and they might be multiplied almost *ad libitum*, is it possible to resist the conclusion that there may and does exist a wound poison which can produce as deadly results as one which conveys living germs into the system, but which is so little encumbered by their presence that its most deadly effects pass away in a few hours, often almost immediately, if you can prevent additional absorption of it into the system? I am not particularly in love with the name sapræmia. The elements of stench or even putridity *may* turn out to be non-essential, or merely accidents. But if there be a septicæmia, as undoubtedly there is, characterised by a bacteric existence, and showing the action of a living, self-multiplying, and continuous ferment, the least taint of which, falling on a torn perineum, produces in time the deadliest results, I must maintain that there is also a poison, call it what you will, which is chiefly dangerous from its quantity or recurrent absorption, and which, however at first derived, is eliminated

speedily after the manner of an unorganised poison. It is this duality of poisons, leading to a most important duality of treatment on which I wish to insist.

Far be it from me to wish to appear, by thus insisting on the purely clinical aspect of the question, to under-estimate the importance of the facts, and theories, and practice of Mr. Lister. Associated as we were as fellow resident officers in charge of the Edinburgh University wards, I was prepared to receive these views perhaps earlier and with more implicit confidence than most men. But *non omnia possumus omnes*—there are those present to-night, particularly my colleague, Dr. William Roberts, who can approach this side of the question more clearly and satisfactorily than I. I believe that the most recent physiological experiments show that certain germ poisons act by the introduction of themselves into, and the propagation of themselves in the economy, as in the case of anthrax for instance, and that others act by merely poisoning the media in which they live with pyrogen, or sepsin, or saprin, or whatever it may finally be called. I confess myself unable from any personal knowledge or experiment of my own to determine this question. If the fact be fairly acknowledged that in metria we have to deal with both forms of poisoning, with one which remains a *contagium vivum*, and with one which is, when introduced, *non vivum*, it is sufficient for our clinical wants. I am particularly desirous of ascertaining to-night whether the surgeons, so fully and ably represented here, meet as constantly as we do with these two forms of poisoning, sometimes combined, often separate—with septic inoculation and septic intoxication, as Koch, I believe, terms the phenomena he produces—with a poison of which, deadly as it is, it may be said, “wash and be clean,” and with another which, once introduced, is proof against all the resources of science until it has accomplished its fell purpose.

In some respects it is unfortunate that medicine is followed so much in specialities, and that puerperal and surgical diseases have been studied from such different points of view. Sir James Simpson did yeoman’s service to

science when he urged us so forcibly to bear in mind the common factors which exist. Yet there is a danger of false conclusions if, on the other hand, we forget the differentiating circumstances. How different is the soil which is prepared for the implantation of poisons in the two sets of cases. The anæmic girl, the scrofulous adult, the robust railway guard, the gouty old man, the confirmed toper, furnish your subjects for primary or secondary operations. The lying-in woman in the prime of life, but with hyperinotic blood-changes, and others, yet imperfectly known, which depend on or are necessary to the new being—changes evidenced by urinary kystine and by the too frequent occurrence of eclampsia—this is our subject. The very different manifestations of scarlatina witnessed in surgical and obstetric practice are proofs of this variety of soil and consequent variety of development. Making allowance for this, however, I think there ought still to be found evidences of the same dual poison in surgery more frequently than is generally acknowledged or acted upon. My experience of amputations, and scalp wounds, lithotomies, and the like, unfortunately dates back some quarter of a century or more, but I think I have a tolerably clear remembrance of stumps opened up and washed with water and of rapid recovery from dangerous pyæmic symptoms as they were then called.

Ovariectomy, owing to its relations with the peritoneum, and for other reasons, furnishes a sort of half-way house between obstetrics and surgery. Out of some fifty cases, I have twice felt obliged, after operation, to draw off the peritoneal contents *per vaginam*, but in one of these there was an almost immediate step from death to life at one tapping; no living, self-multiplying germs could have been left behind. If they had been at work there, their work was evidently finished, or they had all obligingly escaped through my aspirator. Looking, as I have recently done, into some of the ordinary works on surgery, I find such a confusion, at least in my apprehension, between traumatic, and surgical, and inflammatory, and irritative, and hectic, and I don't know how many other fevers, that I can form no trust-

worthy conclusions. They are as involved as a description of puerperal fevers a few years ago, and that is saying not a little to their discredit. It is the fashion nowadays, I believe, to introduce drainage tubes into every wound larger than a leech-bite, and the growth of the practice is suggestive. It seems to say, "Run off as much of the poisonous fluids as you can, nature will eliminate the residuum." And this is acted on and practically approved, alike by those who are careful to apply the usual antiseptic antidotes or preventives of living germs, and by those who are not. I leave the matter in the hands of my surgical friends. You have the inflammatory results of traumatic injuries to deal with, as we have, and to a much greater extent. You have the occasional interference of zymotic contagia, though hardly in such dangerous and insidious form. You have embolic pyæmia just as we have, and you have also what is termed septic poisoning. I am curious to know whether you equally meet with or recognise two distinct forms of this in ordinary practice—a form which you can wash away as you could remove an improper medicated lotion—and a form which is as ineradicable as a vaccine inoculation. Circumstances may render a dual practice less often necessary in your case than in ours, but the principles of action should be the same.